

**WHAT IS CLAIMED IS:**

1. An engine cooling system control apparatus for vehicles configured to prompt a pump cooling water to sequentially pass through an engine and a radiator for cooling the engine, wherein the engine cooling system control apparatus comprises:

5 an electronic valve means for adjusting the amount of cooling water circulating via the radiator;

a thermometer for detecting the temperature of the cooling water having passed through the engine; and

10 a controller for controlling operation of the electronic valve means in response to comparing the cooling water temperature detected by the thermometer with an established target temperature.

2. The apparatus as defined in claim 1, wherein said electronic valve means comprises:

15 a valve the operation of which adjusts the amount of cooling water circulating via the radiator;

a motor for transmitting power to said valve to activate the valve; and

a motor driving part for applying power to the motor to drive the motor in response to a control signal from the controller.

3. The apparatus as defined in claim 1 further comprising:

20 a throttle position sensor for detecting the throttle position of an engine; and

an tachometer for measuring engine RPM, wherein the controller determines an engine load condition in response to the throttle position detected by the throttle position sensor and an engine RPM measured by the tachometer to determine a target

set-up temperature in response to the determined engine load condition.

4. The apparatus as defined in claim 1 further comprising cooling fan means for cooling the radiator, wherein the controller drives the cooling fan means in response to the cooling water temperature and adjusts the speed of the cooling fan means.

5. The apparatus as defined in any one of claims 1 to 4, wherein the controller determines a valve opening and closing level via proportional integral control using a measured engine cooling water temperature and a target pre-set temperature as input parameters.

6. A vehicle engine cooling system control method configured to pump cooling water from a water pump to sequentially pass through an engine and a radiator for cooling of the engine, wherein the vehicle engine cooling system control method comprises:

determining an operating load in response to the throttle position of an engine and engine RPM;

15 determining a pre-set temperature in response to the operating load;

comparing the pre-set temperature with actual cooling water temperature; and

controlling the valve opening and closing level of said valve means in response to the comparative result of the two temperatures to control the flow of circulating cooling water.

20 7. The method as defined in claim 6, wherein the valve opening and closing level is carried out by a proportional integral control using the actual cooling water temperature and the pre-set temperature thus determined as input parameters.

8. The method as defined in claim 6 further comprising a step of adjusting a cooling fan speed for cooling a radiator and adjusting the speed of the cooling fan in

response to the cooling water temperature, wherein the cooling fan speed adjusting step further comprises a step of adjusting the cooling fan speed in response to the comparative result of the current cooling water temperature and a value determined by the set-up temperature determining step and the pre-set temperature value.